Question number	Answer	Notes	Marks
1 (a)	shape; order; names; ignore order width to scale / area to scale;	allow names or levels	4
(b)	pyramid shape; different organisms have different masses / less mass further up pyramid / bush has greatest biomass / different bar widths / eq;	 allow size	2
(c)	respiration; uneaten / not all eaten; not digested / indigestible; death / decomposition / eq;		max 2
(d)	decrease; less caterpillars / less food / less bush / eq;		2

TOTAL 10 MARKS

Question number	Answer	Notes	Marks
2 (a) (i)	th stle;		1
(ii)	song thrush;		1
(b) (i)	A iris / cornea; B pupil;		2
(ii)	1. sclera / sclerotic; 2. ptic nerve; 3. lens / cornea;		3
(c) (i)	number/amount/group/all of organisms of same <u>species</u>;	allow correct binomial name of a species ignore type	1

(c)(ii)	1. variation / variety; 2. mutatio 3. (white snails) survive / survival / survival of the fittest; 4. not seen/camouflaged / not eaten / not killed; 5. reproduce / breed; 6. pass on gene/allele/DNA (for light shell) to offspring;	allow converse for black snails ignore do not die	Max 5

Total 13 marks

Question number	Answer	Notes	Marks
3 (a)	grass;		1
(b) (i)	1600;;	allow one mark for 96 000 or 1.6 or ÷ 60 in working	2
(ii)	1. anaerobic (respiration);		
	2. les oxygen;	ignore oxygen debt	
	3. lactic acid / low pH;		
	4. fects enzymes / denatures enzymes;	ignore muscle fatigue / cramp / pain	
	5. les energy / less ATP;		Max 3

(c)	1. variation / variety; 2. mutation mutates; 3. rvive / survival / survival of the fittest; 4. reproduction / breed / mate / produce offspring; 5. pass on gene / DNA / allele;	allow converse 3. gnore several generations / increase in number 4. gnore pass on mutation unless defined / characteristic	Max 4

(d)(i)	light passes through retina twice / retina again / more light through retina / more detection by retina / more stimulation of retina / more retina cells stimulated / reflects back through retina / eq;		1
(ii)	large(r) pupil / dilated pupil / expanded pupil / <u>more</u> rods / larger hole in iris / radial muscles contract more / eq;	ignore more cones ignore smaller iris ignore circular muscles relax	1
(e)(i)	1. lion eats <u>protein</u> / meat is <u>protein</u>; 2. am ase cannot digest <u>protein</u>;	1. allow lion does not eat <u>starch</u> / meat has no <u>starch</u> 2. low amylase digests <u>starch</u>	2
(ii)	1. increase surface area / increase surface area to volume ratio; 2. <u>pr ease</u> / <u>pepsin</u>;	ignore enzyme	2

<table>
<tr><th>Question number</th><th>Answer</th><th>Notes</th><th>Marks</th></tr>
<tr><td>4 (a)</td><td>
<table>
<tr><th>sentence</th><th>number</th></tr>
<tr><td>The number of organisms is</td><td>(8)</td></tr>
<tr><td>The number of different types of plant is</td><td>2 / two;</td></tr>
<tr><td>The number of animals is</td><td>6 / six;</td></tr>
<tr><td>The number of primary consumers is</td><td>2 / two;</td></tr>
<tr><td>The number of food chains is</td><td>5 / five;</td></tr>
</table>
</td><td></td><td>4</td></tr>
<tr><td>(b))</td><td>producer(s);</td><td></td><td>1</td></tr>
<tr><td>(ii)</td><td>predator / <u>tertiary</u> consumer / carnivore;</td><td></td><td>1</td></tr>
<tr><td>(c) (i)</td><td>decrease / fewer / less / eq;</td><td>Ignore die out / extinct</td><td>1</td></tr>
<tr><td>(ii)</td><td>increase / more / eq;</td><td></td><td>1</td></tr>
</table>

Total 8 marks